



Queen's
UNIVERSITY

Providence Care



An Investigation of Sleep and Neuropsychiatric Measures in Brain Injury Rehabilitation

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Conflicts of Interest

- Studies funded by Providence Care Innovation Fund
- Studies funded by Queen's University (RIG and Dean's Graduate Fund)



Introduction

Brain injury in Canada

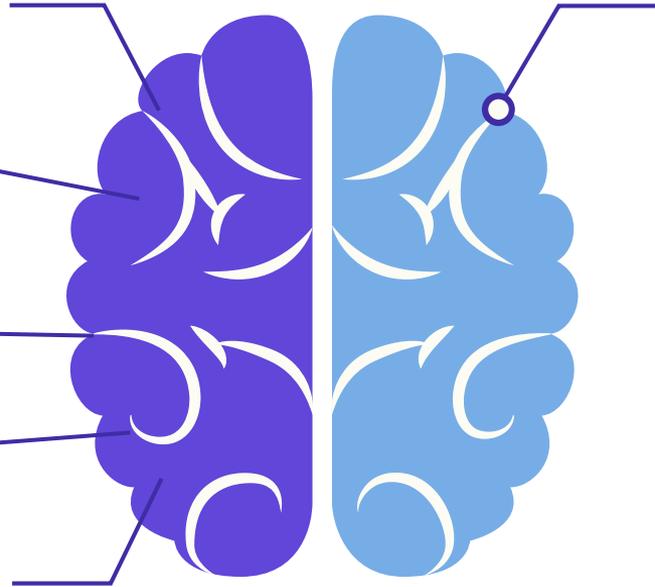
1 new case every 3 minutes.

Increased risk of psychiatric morbidity

Sleep disturbance

Hospital environment

Long-term Disability



Hypothesis:

Participants have a better quality of sleep at home compared to in the hospital. We expect that poor sleep will be associated with higher levels of depression and anxiety and lower functional capacity.

Methods - Data Collection

5
min

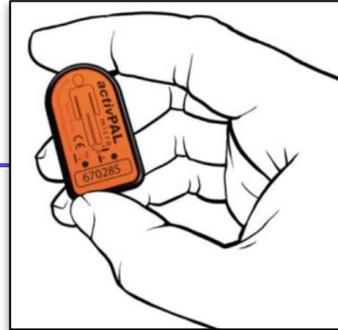
Interview

7
days

Sleep Diary

7
days

**ActivPAL
Accelerometer**

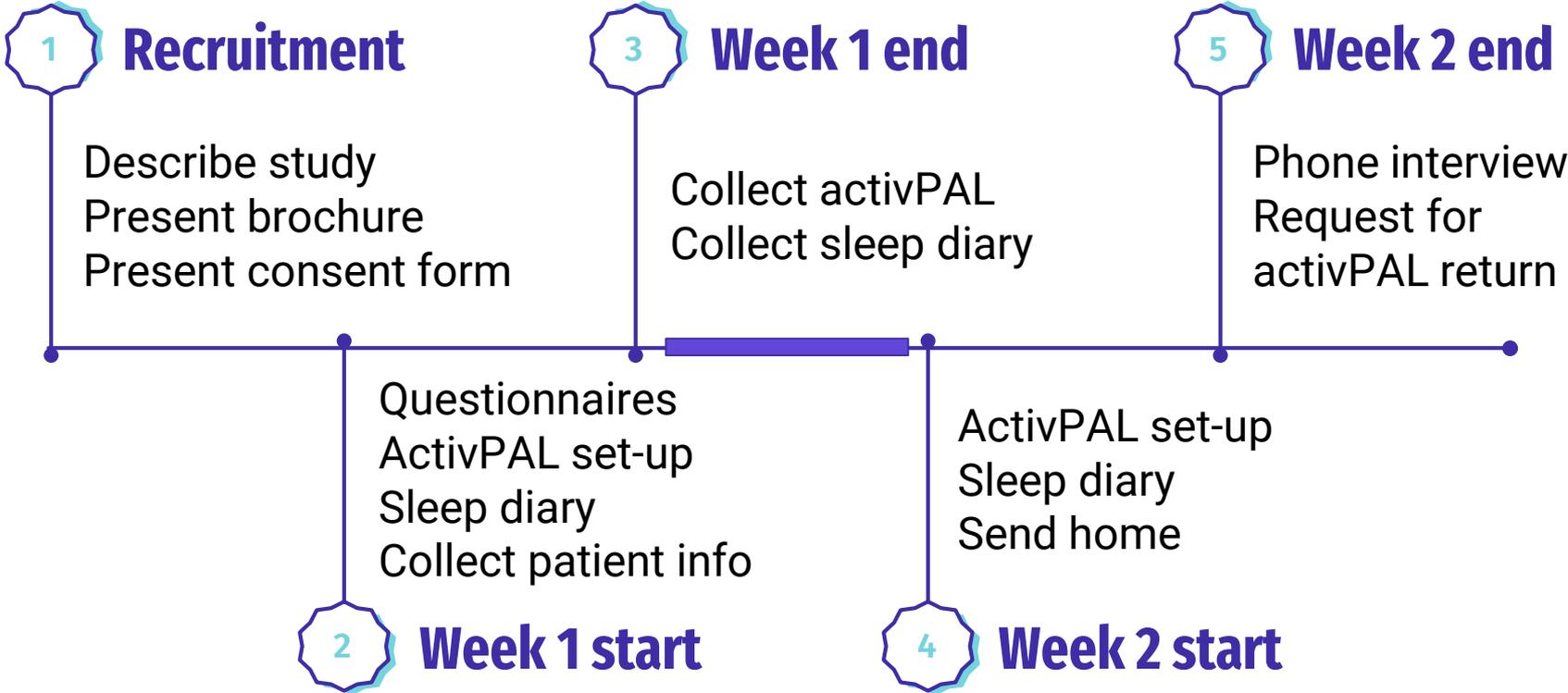


15
min

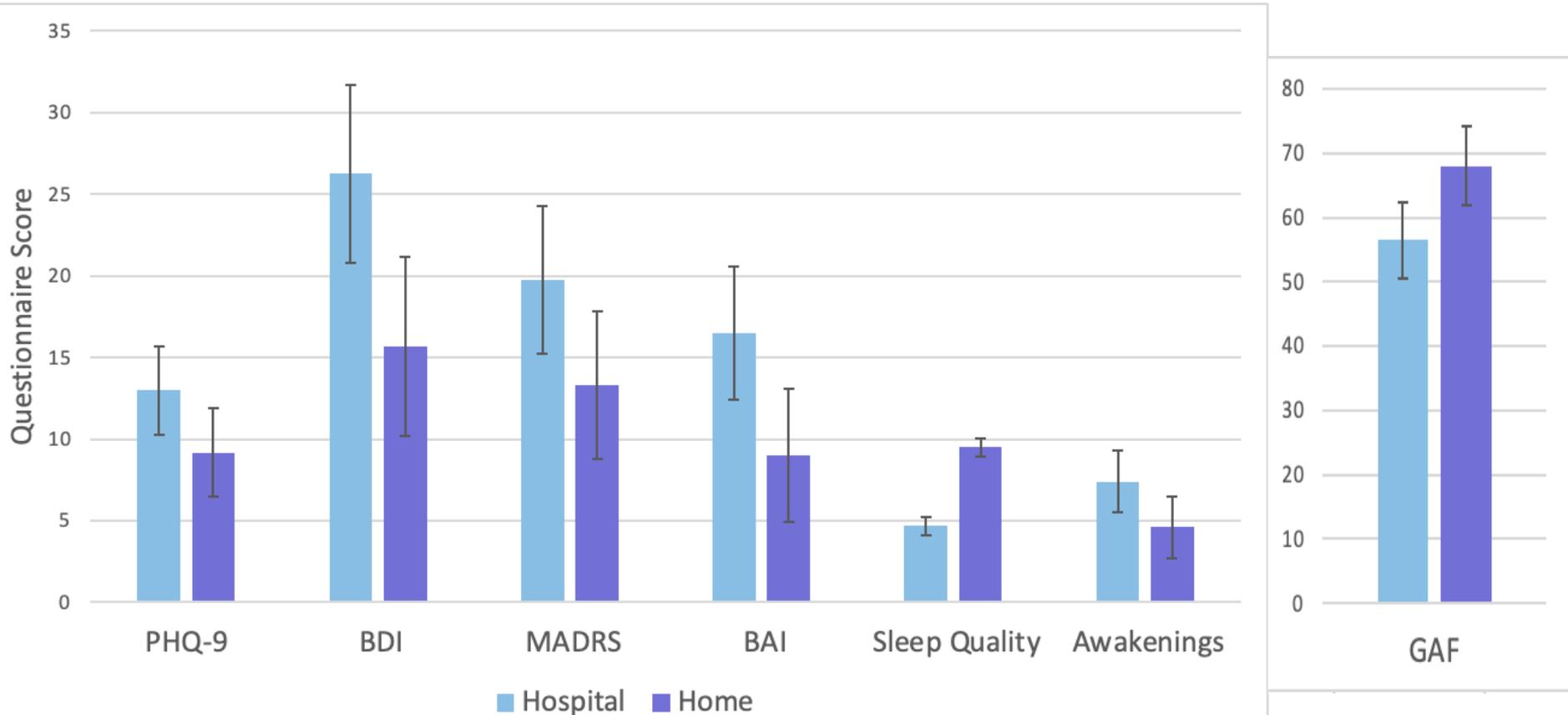
Questionnaires

- Patient Health Questionnaire - 9 (PHQ-9)
- Beck Depression Inventory (BDI)
- Montgomery-Asberg Depression Rating Scale (MADRS)
- Beck Anxiety Inventory (BAI)
- Global Assessment of Function (GAF)

Methods - Timeline



Results



Discussion

What is left to do?

Analyze the activPAL data: Mean nightly sleep time, activity level, napping habits

Examine the effect of other factors that influence sleep.

Correlational analysis.

What will we gain from this study?

- Optimization of care for this patient group
- Reduce the risk of long-term neuropsychiatric symptoms
- Reduce the cost of care for patients and the healthcare system
- Increased turnover in rehabilitation programs

Conclusion



So far, our hypotheses have been supported:

WHEN PARTICIPANTS GO HOME:

- Depression and anxiety improved
- General level of functioning improved
- Sleep quality improved
- Number of awakenings decrease

Compliance with study materials

- All participants wore the activPAL
- No participants filled out their sleep diary for the full data collection period

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Thank you for listening! For any further questions - contact: e.chu@queensu.ca